

REMARKS

I. Status of the Currently Pending Claims

The application as filed originally included 12 claims. Claims 1 and 6 were previously cancelled. Claims 11 and 12 were the only independent claims. This response amends each of independent claims 11 and 12, amends each of dependent claims 2-5 and 7-10, and adds new dependent claims 13-21. All of the dependent claims depend on either amended claim 11 or amended claim 12.

As amended, claims 11 and 12 now expressly include the transition word “comprising,” to clarify that these claims are open-ended. Applicant acknowledges the statement in the Office Action that original claim 12 satisfies all three prongs of the analysis for treatment of claim elements under 35 U.S.C. §112, sixth paragraph. As amended, this “conclusion” as to claim 12 is now clearer.

Amended dependent claims 2, 10, 13, and 18 recite features that are inherent from the Specification, and thus should raise no Section 112 issues.

Applicant submits herewith a corrected Figure, marked as “Replacement Sheet.”

This response also amends the Abstract and the remainder of the Specification, to overcome the objections set forth in the Office Action. More particularly, the Abstract now has a minimum of 50 words, and the word “(Figure)” has been deleted. The amended Specification now includes the headings requested at the bottom of page 3 of the Office Action. This response also amends the Specification in the manner specifically suggested on the top half of page 4 of the Office Action. Applicant respectfully asserts that all of the §112 objections and rejections are overcome or rendered moot by this amendment.

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Substantively, claims 7, 8, and 12 were rejected for alleged lack of novelty under § 102(b) based on Japanese Patent No. JP 6214947A ("JP '947"). Claims 7, 9, 10, and 12 were rejected for alleged lack of novelty under § 102(b) based on Holyoake U.S. Patent No. 5,556,335 ("Holyoake '335").

Claims 2, 3, and 11 were rejected for alleged obviousness under § 103 based on Daniels et al. U.S. Patent No. 4,320,696 ("Daniels '696") in combination with Smith et al U.S. Patent No. 6,176,777 ("Smith '777"). Claim 4 was rejected for alleged obviousness under § 103 based on the same combination of Daniels '696 and Smith '777, and further in view of Meurer U.S. Patent No. 5,476,419 ("Meurer '419"). Claim 5 was rejected for alleged obviousness under § 103 based on the same prior combination of Daniels '696 and Smith '777, but further in view of de Villiers et al., U.S. Patent No. 5,647,532 ("Villiers '532").

Applicant respectfully traverses the rejections and requests reconsideration of the patentability of the claims, for the reasons explained below. More specifically, applicant respectfully asserts that the amendments to the claims and/or the following remarks either overcome or render moot these substantive rejections.

II. The Claimed Invention

Generally, each of independent claims 11 and 12 describes the invention, an air conditioner for an aircraft cabin. The claimed invention includes a structure or method for generating and directing an air jet (26) into the aircraft cabin (10) wherein the structure for directing the air jet (26) is rotatable. More particularly, the temperature of the air jet (26) is measured. Then, depending upon the measured temperature, the direction of and/or the impulse of the air jet are altered. This altering occurs by rotating the structure that generates and directs the air jet, thereby to vary the injection angle of the air jet relative to vertical.

III. Japan '947 Does Not Anticipate Any Claims

Japan '947 teaches a blow off louver 8 located in a blow off port of the ventilation vent of a casing 7. The shape, i.e. the angular orientation of the louver elements, is varied from small to large to initially allow the temperature of the heat exchanger 4 to raise, prior to maximum outflow of air. This gradual opening of the louvers 8 shortens the amount of time needed to blow hot air into the environment.

Japan '947 has nothing to do with aircraft cabins. That deficiency alone negates any possibility of Japan '947 anticipating claim 12, or either of claims 7 and 8. Also, Japan '947 fails to teach any structure for rotating a blower, i.e. a guide pipe (22), with respect to a horizontal axis so as to vary the injection angle, α , of the air jet (26) with respect to vertical.

For these reasons, Japan '947 clearly does not anticipate any of claims 12, 7, or 8, or claim 11 for that matter (on which claims 7 and 8 depend).

IV. Holyoake '335 Does Not Anticipate Any Claims

At the outset, applicant notes that Holyoake '335 suffers from the same deficiency as Japan '947. That is, Holyoake '335 does not relate to an aircraft cabin. Therefore, Holyoake '335 cannot anticipate any of claims 7, 9, 10, or 12.

Perhaps more importantly, claim 12 includes a means for generating and directing an air jet into an aircraft cabin, wherein the claimed structure is rotatable. The change in the direction of the air jet is affected by rotation of the structure that generates and directs the air jet.

Holyoake '335 does not teach any structure that is rotatable so as to affect a change in an air jet. Instead, Holyoake '335 teaches linear movement, i.e., upward or downward, of a deflector

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plate 5 so as to change air flow. Such a plate 5 would take up too much space within the relatively limited confines of an aircraft.

The claimed invention allows more precise control of an air conditioning air jet, compared to the use of a relatively bulky, linearly movable deflector 5. That is, the air-jet direction that results from the use of a diverter/deflector is not as efficiently diverted or as effectively controlled as that provided by the claimed invention, which comprises a rotatable air flow source.

V. The Pending Claims Differ From The Prior Cited Art

Daniels '696 serves as the primary reference for each of the other substantive rejections, based on alleged obviousness. Nonetheless, the Office Action fails to set forth an objective reason for combining Daniels '696 with any of these other references. Thus, the asserted obviousness rejections reflect an improper hindsight reconstruction of the prior art, based on applicant's specification.

Also, even if Daniels '696 were combined with one or more of these other cited patents, the resultant combination would still be deficient. That is, the resultant combination would not include a blower that is rotatable, a feature that is included in independent claim 11, and likewise incorporated with each of dependent claims 2, 3, 4, and 5.

Thus, for each of claims 11, 2, 3, 4, and 5, the claimed invention differs structurally from the relied upon combination of prior art references upon which the Section 103 rejections are based. Accordingly, these obviousness rejections are improper and should be withdrawn.

VI. The Pending Claims Should Be Allowed Over The Prior Cited Art

All of the pending claims patentably distinguish over the cited prior art. More particularly, for the reasons explained above neither Japan '947 nor Holyoake '335 anticipates either of

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independent claims 11 or 12, nor any of the dependent claims. Neither reference shows a rotatable means for generating and directing an air jet into an aircraft cabin. Daniels '696 suffers from the same deficiency.

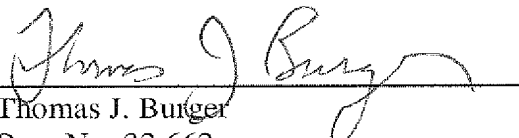
For these reasons, each of independent claims 11 and 12 patentably defines over the cited prior art. For substantially the same reasons, and further because each of dependent claims 2-5, 7-10, and 13-21 recites one or more additional features in combination with the features of either independent claim 11 or 12, applicant respectfully submits that each of the dependent claims is also patentable.

VII. Conclusion

Based on the amendments to the specification and the claims, and these Remarks, applicant respectfully submits that all presently-pending claims are patentable and should be allowed without delay.

Applicant does not believe that any fee is due in connection with this submission. However, if any fees are necessary to complete this communication, the Commissioner may consider this to be a request for such and charge any necessary fees to Deposit Account No. 23-3000.

Respectfully submitted,



Thomas J. Burger
Reg. No. 32,662

Wood, Herron & Evans, L.L.P.
441 Vine Street, 2700 Carew Tower
Cincinnati, OH 45202
(513) 241-2324 (voice)
(513) 241-6234 (facsimile)